

Patent claims

1. A heat exchanger, in particular a charge-
air/coolant radiator (1), with a disk structure
5 having a plurality of disks (2), two adjacent
disks (2) defining an intermediate space through
which a heat transfer medium flows, and having in
each case one heat transfer medium inlet (9) and
heat transfer medium outlet (11), characterized in
10 that at least two heat transfer medium ducts (5,
6) are provided per heat transfer medium inlet
and/or outlet (9, 11 respectively).
2. The heat exchanger as claimed in claim 1,
15 characterized in that the heat transfer medium
ducts (5, 6) run perpendicular to the plane of the
disks (2).
3. The heat exchanger as claimed in claim 1 or 2,
20 characterized in that the disks (2) are of axially
symmetrical design, based on their longitudinal
axis, with regard to the heat transfer medium
ducts (5, 6).
- 25 4. The heat exchanger as claimed in one of the
preceding claims, characterized in that disks (2)
are of axially symmetrical design, based on their
transverse axis, with regard to the heat transfer
medium ducts (5, 6).
- 30 5. The heat exchanger as claimed in one of the
preceding claims, characterized in that the heat
transfer medium inlet (9) and/or the heat transfer
medium outlet (11) has a branching section (7) or
35 converging section (10).

6. The heat exchanger as claimed in claim 5, characterized in that the branching section and/or converging section (7, 10 respectively) are designed in the form of an arc of a circle.
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7. The heat exchanger as claimed in one of claims 5 and 6, characterized in that a bend of 30° to 90°, as seen in the flow direction, is provided in the region of the branching section (7) and/or
- 10 converging section (10).
8. The heat exchanger as claimed in one of claims 5 to 7, characterized in that the heat transfer medium inlet (9) which merges into two heat
- 15 transfer medium ducts (5) after the branching section (7) runs parallel to the heat transfer medium ducts (5), while the bipartite part of the branching section (7) is arranged in a plane which is perpendicular to said heat transfer medium
- 20 ducts (5).
9. The heat exchanger as claimed in one of claims 5 to 8, characterized in that the heat transfer medium outlet (11) which merges from two heat
- 25 transfer medium ducts (6) into the converging section (10) runs parallel to the heat transfer medium ducts (6), while the bipartite part of the branching section (7) is arranged in a plane which is perpendicular to said heat transfer medium
- 30 ducts (6).
10. The use of a heat exchanger as claimed in one of claims 1 to 9 as a charge-air/coolant radiator (1) or oil cooler.